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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,175	02/11/2002	Hans-Peter Koch	10191/2245	5019

7590

09/07/2004

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EXAMINER

FONTAINE, MONICA A

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 09/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/074,175	Applicant(s) KOCH ET AL.	
	Examiner Monica A Fontaine	Art Unit 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

This office action is in response to the Amendment filed 23 June 2004.

All rejections are maintained except claim 8 (and dependent claims 9-11), due to applicant's amendment. A new rejection of Claims 8-11 is in the following section. For purposes of convenience, the rejection of Claim 1 is repeated herein. The text of all other rejections can be found in the office action mailed 24 March 2004.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rutz et al. (U.S. Patent 5,268,140), in view of Bock et al. (U.S. Patent 5,506,199). Rutz et al., hereafter "Rutz," show that it is known to carry out a method for manufacturing a pressed part from a soft magnetic composite material (Abstract), the method comprising providing a starting mixture including an iron powder and an auxiliary pressing agent (Column 6, lines 27-48), pressing the starting mixture to form a pressed part (Column 6, lines 27-48), and annealing, in an annealing step, the pressed part in air (Column 7, lines 15-36). It is hereby noted that air itself is a mixture of gases, approximately 78 percent nitrogen, 21 percent oxygen, and 1 percent of other gases. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention

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was made to prevent oxidation in a controlled environment, thereby decreasing the concentration of oxygen in the air. It would also be expected that although applicant claims a percentage of oxygen that is less than normal air, his results could be suggested by carrying out an annealing process in an environment of air wherein the concentration of oxygen is slightly higher than the claimed range. Although Rutz shows annealing in environments including air or an inert gas (nitrogen: Column 8, lines 60-62), Rutz does not explicitly show annealing the pressed part in a gas mixture of inert gas and oxygen. Bock et al., hereafter "Bock '199," show that it is known to carry out a method for manufacturing a pressed part including annealing the pressed part in a gas mixture of inert gas and oxygen (Column 3, lines 3-5; It is noted that the instant specification does not show that the specific claimed concentration yields new and unexpected results.

Further, the specification discloses that annealing can take place in air, an inert gas, OR a gas mixture (pages 6-7), and therefore the specific novelty of the claimed concentration is not apparent and is assumed to be an obvious experimental design choice of one of ordinary skill in the art.). Bock '199 and Rutz are combinable because they are concerned with a similar technical field, namely, that of compression molding processes which include an annealing step. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to carry out Rutz's annealing step in Bock '199's inert-gas-and-oxygen-mixture environment in order to capitalize on desirable chemical and physical changes which occur in this type of environment.

Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rutz et al. (U.S. Patent 5,268,140), in view of Bock et al. (U.S. Patent 5,506,199), as stated in the paper mailed 24 March 2004.

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Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rutz and Bock '199, as applied to claim 1 above, further in view of Bayer (U.S. Patent 6,383,281), as stated in the paper mailed 24 March 2004.

Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rutz and Bock '199, as applied to claim 1 above, further in view of Bock et al. (U.S. Patent 5,047,391).

Regarding Claim 8, Rutz shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show an annealing step before the annealing step of claim 1, nor does he show a postforming process. Bock et al., hereafter "Bock '391," show that it is known to carry out a method of manufacturing a pressed part comprising initially annealing the pressed parts at a temperature in air (Column 3, line 24-30), and postforming the pressed parts (Column 3, line 25). It is noted that annealing temperatures will vary with material (See Rutz, Column 2, lines 25-32). Bock '391 and Rutz are combinable because they are concerned with a similar technical field, namely, that of manufacturing methods which yield heat-treated metal composite articles. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Bock '391's postforming process in conjunction with Rutz's and Bock '199's molding method in order to refine the shape of the annealed article.

Regarding Claim 9, Rutz shows the process as claimed as discussed in the rejection of Claims 1 and 8 above, including a method wherein the pressed parts are initially annealed at a temperature of 230°C to 310°C (Column 7, lines 25-27), meeting applicant's claim.

Regarding Claim 10, Rutz shows the process as claimed as discussed in the rejection of Claims 1 and 8 above, including a method wherein mechanical shaping takes place as a compression process at a pressure between 600MPa and 900MPa (Column 6, lines 42-44). Rutz

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does not show carrying out this mechanical shaping prior after one annealing process. Bock '391 shows that it is known to carry out mechanical shaping processes after one annealing process and before another annealing process (Column 2, lines 15-24, 52-65). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to carry out Rutz's and Bock '199's pressing process after the annealing process, as suggested by Bock '391, in order to refine the shape of the annealed article.

Regarding Claim 11, Rutz shows the process as claimed as discussed in the rejection of Claims 1, 8, and 10 above, including a method wherein mechanical shaping takes place as a compression process at a pressure of between 700 MPa and 800MPa (Column 6, lines 42-44), meeting applicant's claim.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rutz and Bock '199, as applied to claim 1 above, further in view of Bock et al. (U.S. Patent 5,047,391), as stated in the paper mailed 24 March 2004.

Claims 14-24, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rutz, in view of Bock '391, as stated in the paper mailed 24 March 2004.

Claim 25 rejected under 35 U.S.C. 103(a) as being unpatentable over Rutz and Bock '391, as applied to claim 14 above, further in view of Bayer, as stated in the paper mailed 24 March 2004.

Response to Arguments

Applicant's arguments filed 23 June 2004 have been fully considered but they are not persuasive.

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Regarding Claim 1, applicants contend that Rutz and Bock '199 do not teach the instant invention because they do not show an annealing atmosphere that includes a mixture of inert gas and oxygen, where the concentration of oxygen in the gas mixture is between 1% and 10%. Applicants further contend that the specification discloses proof that it is advantageous for the annealing atmosphere to include a certain minimum amount of oxygen.

For purposes of the examiner's response, it is noted that applicant's second embodiment is that which discloses the now-claimed double-annealing process. See page 7, lines 5-35 for explicit discussion of the second embodiment. The first embodiment discloses only one annealing step.

Applicants arguments with respect to whether the specification discloses proof that it is advantageous for the annealing atmosphere to include a certain minimum amount of oxygen are not persuasive. The examiner points to page 7, lines 5-11 and 28-35 for support for her position. In the cited passage, applicants disclose that the FIRST annealing step may take place in air, an inert-gas atmosphere, a nitrogen atmosphere, OR a mixture of inert gas and oxygen. Also in the cited passage, applicants disclose that the SECOND annealing step may take place in a nitrogen-air mixture or a noble-gas-air mixture (for the second annealing step, there is mention of ideal concentrations of air, not oxygen). There is no mention, for this second embodiment, of a particular advantage of a using a mixture of inert gas and oxygen containing a specific concentration of oxygen. In fact, the "ideal" atmosphere for the FIRST annealing step is identified as an air-nitrogen atmosphere, where concentrations of air, not oxygen, are specifically noted (see page 7, lines 13-16). Therefore, it is maintained that the instant specification does not show that the specific claimed concentration yields new and unexpected results and that the

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specific novelty of the claimed concentration is not apparent and is assumed to be an obvious experimental design choice of one of ordinary skill in the art. Likewise, it is maintained that the teachings of Rutz and Bock '199 teach the claimed invention.

Regarding Claim 14, applicants contend that the Rutz and Bock '391 do not teach the invention because Bock '391 does not disclose postforming an annealed part. This is not persuasive because his grinding step, albeit a mechanical forming step, is in fact a postforming operation and therefore meets applicant's step.

Applicants contend that the rejections of all additional claims do not render said additional claims for the reasons discussed in relation to independent claims 1 and 14. They are not persuasive for the reasons discussed above.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A Fontaine whose telephone number is 571-272-1198. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Colaianni can be reached on 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Maf
September 2, 2004



MICHAEL P. COLAIANNI
SUPERVISORY PATENT EXAMINER